

# Public Response and Involvement to ECQ and Vaccination Amidst COVID-19 Crisis: An Analysis on Institutionalizing Post-Pandemic Community Behavior

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## Abstract

The economic condition of a specific country has been defied amid the COVID-19 crisis. Yet, post-pandemic community behavior has not been analyzed for probable institutionalization to help gradually recover the economy. As a result, this paper aimed to address that gap by examining the public response to and involvement in the enhanced community quarantine and vaccination in the Bicol Region. This study used the quantitative research method through a causal-correlational research design. The findings indicate that institutionalization of post-pandemic community behavior is highly likely due to the Bicolanos' active involvement in community activities during the implementation of the ECQ and vaccination in the region. Kurt Lewin's change management model and the inclusive socio-economic and political institutions model can be used to execute policies that the government demands to implement pluralistically. However, the policymaking body may consider the age, average household monthly income, and level of awareness of local people when formulating post-pandemic community behavioral policies because these variables significantly influence their community involvement decisions.

**Keywords:** *community behavior, economic recovery, COVID-19, pandemic, vaccination*

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## 1. Introduction

The economy is the heart and soul of every country. The large set of interconnected production, consumption, and exchange activities allocate scarce resources. The production, consumption, and distribution of goods and services, also known as an economic system, are used to meet the needs of those who live and work in the economy (Kenton, 2022). However, in the last quarter of 2019, the world's economic system was challenged by the outbreak of the COVID-19 virus, which relentlessly affected all walks of life even up to this day. As a result, COVID-19 has wreaked far more economic havoc than any recent disease outbreak or financial crisis (Shretta, 2020; Haruhiko, 2020).

Economic recovery could be rapid (IMF, 2020), but it will require decisive and effective action to control the disease and restore economic activity, including global value chains (Lucas, 2020). According to Sen (2021), as economies grow, states can tax that revenue to gain the capacity and resources needed to provide the public goods and services that their citizens require, such as healthcare, education, social protection, and essential public services. However, people in developing countries, such as the Philippines, must increase their efforts to achieve effective economic recovery in the face of the COVID-19 crisis. It has been demonstrated over and over again that any country's government requires the participation of its population. In the Philippines where resources are scarce, community involvement or mobilization is critical. Furthermore, the government should prepare communities for crises and disasters, given that the Philippines has several geographically isolated and disadvantaged areas (GIDA) with vulnerable groups, particularly in the Bicol region. Hence, these communities should be able to withstand a crisis independently towards achieving economic stability.

To realize this, Filipinos must establish or institutionalize a post-pandemic community behavior (PPCB) in which everyone can engage in normal economic activities (production, consumption, and distribution of goods and services) without compromising their health conditions or status due to the COVID-19 virus. Thus, this paper aims to fill that gap by analyzing the institutionalization of PPCB in the case of Bicolanos by determining the public response (PR) to and community involvement (CI) in the enhanced community quarantine (ECQ) and vaccination roll-out amidst the COVID-19 crisis.

### ***Background of the Study***

COVID-19 is a persistent threat to any country's public health and economic systems. As a result, the World Health Organization (WHO) declared COVID-19 a pandemic on March 11, 2020. With this, the WHO vehemently recommends that social distancing, as well as a possible lockdown or community quarantine (CQ), be implemented in affected countries with adverse situations. In the Philippines, though the case was not the same as in Italy, China, the US, or Spain at the time, President Duterte issued Proclamation No. 929, declaring the entire Philippines in a state of calamity for a period of six (6) months beginning March 16, 2020. Imposing an ECQ through the island of Luzon from midnight of March 17 to 12:00 AM on April 13, 2020, effective unless earlier lifted or extended as the circumstances may warrant (Calimon & Masangkay, 2020). The purpose of this ECQ is to prevent the spread of coronavirus in the region and to safeguard Filipinos. To comply with that directive, some government agencies and schools (elementary, secondary, and tertiary levels) have temporarily closed, as have business establishments such as malls. As of September 24, 2022, the Philippines has 3,938,203 coronavirus cases, 62,790 of which are fatal and 3,840,014 of which have been recovered (Worldometer, 2022). On the other hand, as of September 25, 2022, vaccination data in the Philippines show 162,679,651 total doses administered, 73,017,553 were fully vaccinated individuals, and 19,211,908 individuals with booster/additional doses (DOH, 2022).

However, aside from exerting efforts to prevent COVID-19 cases from affecting a more significant population and putting Filipinos at risk, public servants must look up to those Filipinos who rely solely on informal sector jobs and live on less than minimum wage because this virus is robbing them of their livelihood (Turalde, 2020). In this battle, the country's marginalized sectors, particularly Bicolanos, are the most affected and vulnerable in the social system. They mostly have no concrete idea about the "how to's" in dealing with this novel virus socially, mentally, and economically (Turalde, 2020). Furthermore, no evidence that implementing lockdown and CQ will ensure complete public safety in the event of a pandemic. Blendon et al. (2008) support this by stating that there is limited evidence determining the best strategies for protecting people economically, socially, and mentally during a pandemic.

As a result, understanding their response to and participation in the ECQ and vaccination will provide significant input to the policymakers in developing PPCB policies

for effective future pandemic mitigation measures (public health preparedness). Furthermore, imperative information from this study will be used as a baseline for enhancing healthcare services and public health system governance in the Philippines during a pandemic crisis.

This study aimed to analyze the institutionalization of PPCB towards inclusive economic growth and policy development through public response and involvement in ECQ and vaccination status in the Bicol Region amidst the COVID-19 crisis. It specifically sought to: determine the vaccination status, level of awareness, and involvement of the residents in ECQ and vaccination roll-out during the COVID-19 crisis; assess the response of the residents about their ability to stay home during ECQ due to the COVID-19 crisis, school closing during ECQ and staying home for work during ECQ; analyze the relationship between residents' awareness, response, and community involvement during the COVID-19 pandemic toward the institutionalization of PPCB; and examine the factors that influence the involvement decisions of residents regarding the ECQ and vaccination implemented by local government units (LGUs).

## **2. Literature Review**

The United Nations (n.d.) describes COVID-19 as the “*defining issue of our time*” and predicts that it will undoubtedly cause significantly more economic harm than any recent disease outbreak or financial crisis (Shretta, 2020; Lucas, 2020). The IMF estimates that as of April 2020, the global economy is expected to fall by -3% (IMF, 2020) and that the pandemic crisis could cause a cumulative loss to global Gross Domestic Product (GDP) of up to \$9 trillion over the years 2020 and 2021, making it the worst economic slump since the Great Depression (Gopinath, 2020). Although it may happen quickly, economic recovery must be accompanied by effective disease management and global value chain restoration (Lucas, 2020). According to a paper by Haan et al. (2006), market-oriented institutions and policies are closely linked to economic growth, mainly when infectious diseases like pandemics are on the rise.

COVID-19 has considerably impacted people's lives and business operations at the regional, national, and international levels. The Philippine government acted quickly, enforcing ECQ to contain the spread of COVID-19 and putting in place an emergency subsidy scheme that involved significant public spending in supporting severely impacted individuals, families, and businesses (Hapal, 2021). The National Capital Region and high-risk provinces were placed under a severe lockdown from mid-March to the end of May

2020, which resulted to significant economic losses (Shinozaki & Rao, 2021). The Inter-Agency Task Force (IATF) released Resolution No. 41 on May 29, establishing the CQ guidelines for the entire country from June 1 to 15, 2020 (Official Gazette, 2020). Only two types of community quarantines—MGCQ and GCQ — were implemented during this time.

**Table 1**

*Definitions CQs in the Philippines are arranged chronologically from March 2020 to June 15, 2020*

Abbreviation	Description	Months
GCQ	General CQ= implementation of CQ protocols (limiting movement and transportation, regulation of operating industries, and presence of uniformed personnel.	March 15- June 15
CQ	Community quarantine= the restriction of movement to mitigate the transmission of the COVID-19 virus.	March 16- April 30
ECQ	Enhanced CQ= stricter definition than GCQ (stringent limitation on movement and transportation, strict regulation of industries and provision of food and essentials, and heightened presence of uniformed personnel.	March 17- May 31
MECQ	Modified ECQ= transition phase between ECQ and GCQ	May 16- May 31
MGCQ	Modified GCQ= transition phase between GCQ and the New Normal	June 1- June 15

*Source: News, Eos, resolutions, and IATF Omnibus Guidelines*

The disease's effects (illness and absenteeism), the policy measures being taken to control its spread (closing businesses and schools, restricting travel and gatherings), and the behavior adjustments people are making to protect themselves (avoiding public places and reducing consumption, especially in social settings) all work together to simultaneously affect supply and demand at various points in the economy. Like other epidemics and pandemics, COVID-19's economic effects are primarily a result of the steps taken to stop the disease's spread rather than a direct result of the illness itself (Lucas, 2020).

The pandemic has again highlighted the value of CI in combating disease outbreaks. The recent Ebola outbreak proved that CI is essential for controlling epidemics. Insufficient CI can cause fear, mistrust, and a lack of community compliance with public health regulations. Governments started prioritizing risk communication and community engagement efforts as part of their pandemic response, especially to the identified geographically isolated and disadvantaged areas (GIDA) in the country through the Bureau of Local Health Systems Development's GIDA Program.

GIDA refers to barangays that are particularly disadvantaged as a result of both physical and socioeconomic issues. The primary goal of this GIDA program is to provide

guidance and direction to GIDAs to strengthen and increase access to quality health care through province-wide/city-wide health systems and equitable and sustainable health care finance. To achieve its goals and objectives, this program includes several components: a) community development (which includes community organization and mobilization, community needs analysis, participatory community planning, resource mobilization, alliance building, and multi-sector partnership); b) technical and financial assistance; and c) monitoring and evaluation (Bureau of Local Health Systems Development, n.d.).

Amidst the COVID-19 pandemic, CI ranged from passive reactions to active engagement, either under government directives or voluntarily. In general, communities, particularly the identified GIDAs, played a critical role in supporting the clinical response to the pandemic, mainly through helping in surveillance, testing, and contact tracing efforts or in the rollout of vaccination. These initiatives were significant and influential when the government did not provide essential services. During the pandemic, challenges to CI included the lack of sustainable government commitment and top-down approaches to community engagement, limitations in engaging marginalized groups and youth, and balancing efforts to contain the virus (The Independent Panel for Pandemic Preparedness and Response, 2021), particularly in implementing PPCB policies.

Although the rapid development of COVID-19 vaccines is a remarkable accomplishment, successfully immunizing the entire world's population poses several difficulties, from manufacturer to distribution, deployment, and, most crucially, acceptance. The ability of governments to convey the benefits of vaccination and to provide vaccinations safely and effectively is crucial for maintaining public trust in vaccines (OECD, 2021). Barry Bloom of the Harvard T.H. Chan School of Public Health states, "*Trust is the essential component in all vaccines.*" Trust in the organizations in charge of vaccination must be added to trust in vaccines. The ability of public health systems and organizations to successfully serve and gain the trust of specific demographic groups in the past may be the cause of the lack of vaccination acceptability (OECD, 2021).

Institutions constantly evolve due to people's repeated actions leading to their formation and reformation (Martin, 2004, as cited in Carter, 2014). But intentionally changing institutions is typically rigid, challenging, and incremental. Additionally, certain adjustments necessitate institutionalizing new guidelines and practices. Internal political or economic processes or external shocks may facilitate institutional change. As in the case of

this study, which aims to institutionalize potential PPCB or practices, citizens may mobilize to protect inclusive institutions (such as universal access to a service) or to demand new ones (such as political rights) (Carter, 2014).

Non-pharmaceutical interventions' (NPIs) effectiveness mainly depends on behavioral adaptation, or people's willingness to abide by rules and regulations regarding their usage and implementation. It can be challenging to determine how behavioral-based public health interventions should be used to combat infectious diseases. Individuals vary in their responses to the risk of infection and their motivations for following health interventions. Economic models typically reveal that people tend to underinvest in illness prevention and control when left independently (Pajaron & Vasquez, 2021). Thus, they need to understand their responses to implement better the potential institutionalization of PPCB or practices in the Philippines.

Theoretically, this study adopted the unfreeze-change-refreeze theory, also known as Kurt Lewin Change Management Model (Cummings et al., 2016), and the inclusive socio-political and economic institutions model. The unfreeze-change-refreeze approach aims to improve and promote organizational change. Lewin (1951, as cited in Cummings et al., 2016) outlined three stages in this strategy. To begin, "unfreezing" entails creating motivation and preparing for organizational change. The goal of this stage is to help an organization in becoming more amenable to changing its practices. The second is "change," where new ideas or methods are implemented within the organization. "Change" involves the development of new attitudes, beliefs, and behaviors. The final stage is "refreezing," which is the stabilizing and integrating of new beliefs, attitudes, and behavior after the change has been embedded in the organizational system. This final stage aims to make the change a permanent and routinely part of an organization's culture. Hence, the researcher believes that communities can adopt this model through policymakers to implement changes, particularly in the institutionalization of new beliefs, attitudes, and behavior following the outbreak of the COVID-19 crisis. However, there is no evidence of literature focusing on Filipinos' conditions and how models could effect change in the lives of residents in the Philippines. This limits the consideration of how this paradigm could be useful and applicable to Bicolanos.

On the other hand, the state supports economic activity through inclusive economic institutions in which entrepreneurs and financial markets (at the micro, meso, and macro

levels) are free to engage in whatever economic activities they choose (Acemoglu & Robinson, 2012). In this model, most people are enabled and encouraged to participate in economic activities that make the best use of their talents and skills and allow them to make the choices they want. Furthermore, inclusive political institutions are a crucial driver of economic growth (Sen, 2021) because they govern political incentives and can exercise societal power. It must, however, be sufficiently centralized and pluralistic (Acemoglu & Robinson, 2012). This approach can be applied in this paper by the inclusive and centralized implementation of the government of PPCB practices through policies that could lead to inclusive economic growth. Because if the community can carry out its financial responsibilities, the country's economy will triumphantly recover.

People desire equitable social and economic systems. They want to have their human rights and freedom upheld. They like a voice in choices that have an impact in their lives. The best way to change this is to establish a new model of global governance that is based on fair globalization, on the rights and dignity of every human being, on living in balance with nature, on considering the rights of future generations, and on success measured in human rather than economic terms (Ofreneo, 2020).

Furthermore, the stimulus organism response (S-O-R) theory and community participation theory in health were used to establish a theoretical paradigm for quantifying the concept or variables in this study. According to Mehrabian and Russel (1974, as cited in Zhang et al., 2021), the S-O-R model suggests that feelings and behaviors are caused by the external environment. An organism or person has a critical role in responding to the stimulus because a person's feelings and emotions could shape the response. In short, this theory or model states that there is a stimulus that triggers a response based on the internal feelings or behavior of an organism (person). This internal input processing can be conscious or unconscious. It also elicits a feeling, which prompts a response (Zhai et al., 2020; Pandita et al., 2021; Zhang et al., 2021). Community participation, on the other hand, encompasses a wide range of acts and refers to the involvement of communities in decisions regarding their future (Hubley, 1990). However, according to Lachapelle and Austin (2014), community participation entails theory and practice relating to the direct involvement of individuals or citizen action groups who may be affected or interested in a decision or action.

The onset of the COVID-19 pandemic is viewed as a stimulus in this study, with the public response, vaccination status, and community involvement serving as responses.



Furthermore, this study examined the link between these characteristics and the particular independent variables that could influence the community's decision to participate in COVID-19 preventative measures or activities during its outbreak. As a result, these theories were employed to develop constructs that might be used for quantitative measurements.

### **3. Methodology**

#### ***3.1. Research Design***

The quantitative method was used in this study following a causal-correlational research design (Creswell, 2014). The quantitative data emerged from the respondents using a questionnaire checklist about their responses and involvement in ECQ and vaccination implemented by LGUs during the COVID-19 crisis. Finally, the data were examined regarding its institutionalization toward inclusive economic growth.

#### ***3.2. Sampling Technique***

This study used a non-probabilistic sampling technique following the purposive sampling and the convenience sampling technique for the available respondents to respond to the questions posed via Google Forms. Convenience sampling (also known as accidental sampling or grab sampling) is a non-probability sampling method in which the researcher chooses the sample based solely on convenience. Non-probability sampling means that the researcher selects the sample rather than drawing it randomly, so not all population members have an equal chance of participating in the study (Simkus, 2022).

#### ***3.3. Respondents of the Study***

The 117 respondents in this study are from Bicol Region and they willingly responded to the researcher's request. Forty-three (43) or 36.75% of the respondents are between the ages of 18 and 22, and 64 (54.70%) are female and single (with 70.10%) (Table 2). The majority are students, teachers or educators, and employees of LGUs, with 30.80%, 27.40%, and 18.80%, respectively. Representatives from various occupations or sectors are present, such as police, private employees, priests, vendors, fishermen, etc. The average family size of the 67 respondents (or 57.26%) is 1 to 5 members, while 39 (33.33%) earn PhP1,000 to PhP20,000 monthly. Furthermore, most of their household members are free from illness and disabilities. Almost 80% of the respondents lived in rural areas, and 63 were from the Camarines Sur province.

**Table 2***Socio-demographic profile of respondents*

Characteristics	F	%	Characteristics	F	%
<b>Age</b>			<b>Household Members</b>		
18-22	43	36.75	1-5	67	57.26
23-27	23	19.66	6-10	47	40.17
28-32	20	17.09	11-15	2	1.71
33-37	9	7.69	16-Above	1	0.85
38-42	8	6.84	<b>Average Household Monthly Income</b>		
43-47	8	6.84	<b>(In PhP)</b>		
48-52	1	0.85	Below-1,000	1	0.85
53-Above	5	4.27	1,001-10,000	39	33.33
<b>Sex</b>			10,001-20,000	39	33.33
			20,001-30,000	14	11.97
Male	53	45.30	30,001-40,000	6	5.12
Female	64	54.70	40,001-50,000	11	9.40
<b>Marital Status</b>			51,001-60,000	-	-
Single	82	70.10	60,001-70,000	1	0.85
Married	35	29.90	70,001-80,000	2	1.71
<b>Educational Attainment</b>			80,001-90,000	1	0.85
High School Level	2	1.70	90,001-100,000	1	0.85
High School Graduate	4	3.40	100,001- Above	2	1.71
College Level	45	38.50	<b>Household Members with Illness</b>		
College Graduate	41	35.00	0	70	59.80
Graduate Degree with Units	11	9.40	1	27	23.10
Graduate Degree Holder	14	12.00	2	14	12.00
<b>Occupation</b>			3	2	1.70
Student	36	30.80	4	2	1.70
Teacher/Educator	32	27.40	5	2	1.70
LGU Employee	22	18.80	<b>Household Members with Disabilities</b>		
Accountant/Financial Analyst	5	4.30	0	103	88.00
Police	4	3.40	1	12	10.30
Sales/Customer Representative	4	3.40	2	2	1.70
No Work	4	3.40			

Characteristics	F	%	Characteristics	F	%
Factory Worker	1	0.90	<b>Location</b>		
Engineer	1	0.90	Rural	83	70.90
Tricycle Driver	1	0.90	Urban	34	29.10
Inventory Control Staff	1	0.90	<b>Province</b>		
Vendor	1	0.90	Camarines Sur	63	53.80
Fisherman	1	0.90	Sorsogon	30	25.60
Private Employee	1	0.90	Albay	8	6.80
Laborer/Construction	1	0.90	Masbate	7	6.00
Health Worker	1	0.90	Catanduanes	5	4.30
Priest	1	0.90	Camarines Norte	4	3.40

### 3.4. Materials

The primary data collection instrument in this study was a survey questionnaire checklist. The Google form link for the questionnaire was sent via Facebook messenger and email. The respondents took only 5 to 10 minutes to respond to the questions in the material. The researcher's academic colleagues validated the questionnaire through content validation, and its reliability was tested with a Cronbach's alpha score of 0.96. It includes questions about their socio-demographic profile, vaccination status, awareness, responses, and involvement in ECQ implemented by LGUs in the Bicol Region.

### 3.5. Data Collection/Gathering Procedure

The researcher conceptualized a paper and formulated a survey questionnaire based on its specific objectives. The validated survey questionnaire's Google Form link was sent to the target respondents via Facebook messenger and email for completion. Furthermore, triangulation through observation and face-to-face, online messaging, or cellphone calls was used to collect salient information from LGUs.

### 3.6. Data Statistical Tools

*Descriptive Statistics.* This statistical tool was used to assess the respondents' socio-demographic profile, level of awareness, and responses to possible questions about this study's objectives. It employed two primary methods:

- a. *Percentage technique*. It was used to determine the proportion, ratio, or fraction of respondents' socio-economic profile, public response to ECQ, and vaccination status in the Bicol Region.
- b. *Weighted Mean*. Following the formula and interpretation, the weighted mean was used to weigh the data obtained in determining the respondents' awareness of the COVID-19 pandemic.

Scale	Interpretation
5.00-4.21	Extremely Aware
4.20-3.41	Moderately Aware
3.40-2.61	Somewhat Aware
2.60-1.81	Slightly Aware
1.80-1.00	Not Even Aware

*Chi-square using Phi Coefficient and Cramer's V*. This tool was used to measure the association between public response and involvement in ECQ of the respondents using SPSSv24.

*Point-Biserial Correlation*. This tool was used to measure the relationship between awareness and involvement of the respondents in ECQ following the equations:

Equation 1:

$$r_{pb} = \frac{m_p - m_q}{s_t} \sqrt{p_q}$$

where:  $r_{pb}$ =relationship (correlation);  $m_p$ = mean score of awareness for yes response  
 $m_q$ =mean score of awareness for no response;  $p$ = proportion of (yes) decision for involvement;  $q$ = proportion of (no) decision for involvement

Equation 2:

$$t = \frac{r_{pb} \sqrt{n - 2}}{\sqrt{1 - r_{pb}^2}}$$

where:  $t$ = test for significance;  $r_{pb}$ = relationship (correlation);  $n$ = sample population;  
 2, 1= constant

*Binary Logistic Regression.* This tool was employed to predict the factors influencing the respondents' involvement decisions to implement ECQ following the equation below through SPSSv24. The dependent variable was respondents' decisions about CI. The independent variables were as follows: sex, age, educational attainment, family size, average household monthly income, location, level of awareness about COVID-19, and vaccination status.

$$CI = \beta_0 + \beta_1 GEN + \beta_2 AGE + \beta_3 EL + \beta_4 FS + \beta_5 AI + \beta_6 LOC + \beta_7 LA + \beta_8 VS + \beta_n N + \mu$$

where: **CI**: Community Involvement Decision; **SEX**: Sex; **AGE**: Age of respondents; **EL**: Educational Level; **FS**: Family Size; **AI**: Average Household Monthly Income; **LOC**: Location (1 = Rural Area, 0 = otherwise); **LA**: Level of Awareness; **VS**: Vaccination Status;  $\beta_0$ : intercept;  $\mu$ : error term

#### 4. Findings and Discussion

Table 3 shows the respondents' vaccination status. It can be gleaned that 115 are vaccinated, 68.40% are fully vaccinated with two doses/jabs, and 35 are fully vaccinated with booster shots. This implies that even if most Filipinos institutionalize vaccination across the country, Bicolanos, particularly in Camarines Sur, remain hesitant to participate in the Department of Health's vaccination campaign. However, if most Filipinos are vaccinated, the vaccination roll-out may be helpful for policymakers in recommending and implementing PPCB as well as normal economic activities that could aid the country's economic boost.

**Table 3**

*Vaccination status of the respondents*

Vaccination Status	F	%
Yes	115	98.30
No	2	1.70
<b>Type of Vaccination</b>		
Fully Vaccinated with Booster	35	29.90
Fully Vaccinated (2doses/jabs)	80	68.40
Partially Vaccinated (1dose/jab)	2	1.70

**Table 4***Level of awareness of the respondents*

Statements	Weighted Mean	Interpretation
A cure (vaccine) has already been introduced and prescribed by World Health Organization.	4.39	EA
Causes threat that influences mental state.	4.45	EA
It can spread through talking and even breathing.	4.47	EA
It will continue to affect other countries in the world.	4.47	EA
It has caused death to those who are infected.	4.52	EA
It will cause a severe illness if will be infected.	4.52	EA
It can be transmitted through smaller droplet nuclei (airborne transmission) that propagate through the air at distances longer than 1 meter.	4.56	EA
Causes threat that influences the use of safety behaviors (e.g., hand sanitizer, washing hands)	4.57	EA
It is spreading significantly in the Philippines and other parts of the country.	4.58	EA
It could become a pandemic concern.	4.59	EA
It can be transmitted during close contact through respiratory droplets (such as coughing) and by fomites (objects or materials which are likely to carry infection, such as clothes, utensils, and furniture).	4.60	EA
An infectious disease that affects respiratory organs with a weak immune system.	4.63	EA
Use disinfectant, proper hand washing, and good personal hygiene practices will be contained.	4.65	EA
It can spread directly from person to person when a COVID-19 case coughs or exhales, producing droplets that reach another person's nose, mouth, or eyes.	4.68	EA

*Legend: 5-Extremely Aware (EA); 4-Moderately Aware (MA); 3-Somewhat Aware (SoA); 2-Slightly Aware (SLA); 1- Not Even Aware (NEA)*

It is explicitly stated that the respondents are well-informed and aware of the COVID-19 pandemic's consequences and outcomes (Table 4). They are highly knowledgeable that

the COVID-19 pandemic threatens mental health, and the use of protective behaviors (e.g., hand sanitizer and washing hands) is necessary. If infected, it causes death and severe illness, especially in those with comorbidities such as heart and lung diseases. They also believed it could spread through talking and breathing, affecting the respiratory organ with a weakened immune system. Aside from person-to-person transmission, respondents thought it could be transmitted via smaller droplet nuclei that propagate through the air or airborne transmission, and during close contact through respiratory droplets (such as coughing) and by fomites (objects or materials which are likely to carry infection, such as clothes, utensils, and furniture). However, respondents are highly aware that the World Health Organization has already introduced and prescribed a cure (vaccine) for COVID-19. They also know how to circumvent the virus using disinfectants, proper hand washing, and good personal hygiene practices.

In this case, they are conscious of the causes, potential preventive measures, and the cure or vaccine roll-out in the Philippines as the World Health Organization prescriptions. People in the community, and even in society, have no reason to remain insentient about the adversities and opportunities brought about by the COVID-19 crisis. Awareness of their environment and specific health concerns and inculcating this as a community practice (sharing legitimate and discerned information within the community) will help the appropriate authority implement PPCB. Once the people in the community have inclusively institutionalized these practices or behaviors, ordinary errands will likely be observed, and a smooth flow of economic activities in the communities will be spearheaded.

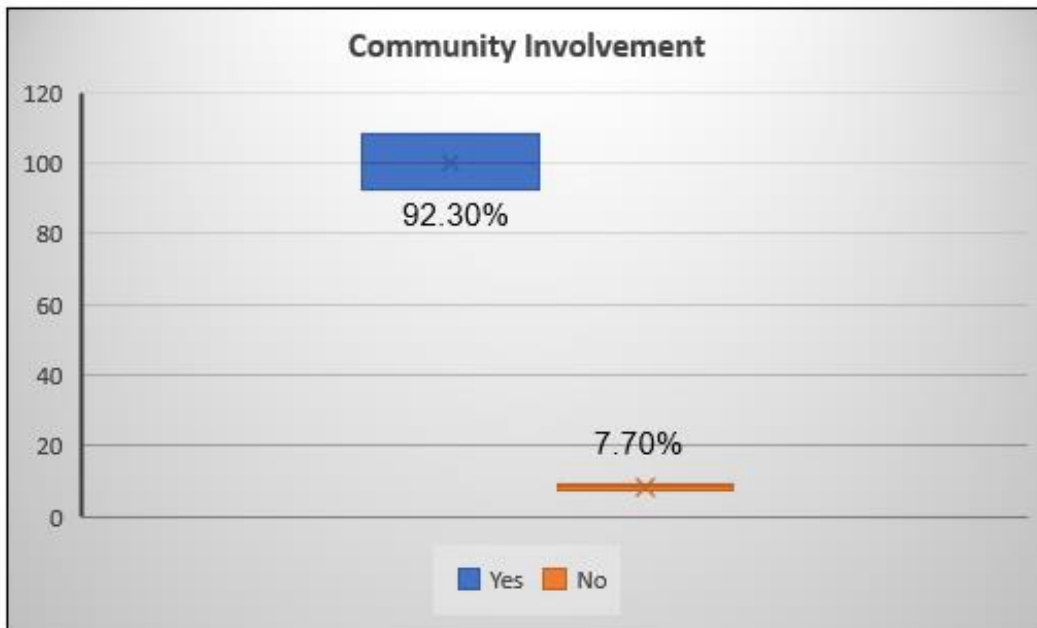
The level of awareness may also be used as a parameter in implementing PPCB because the information gathered will serve as baseline data to inform policymakers that the community can absorb salient information about the pandemic's negative impacts on their participation or involvement in the institutionalization of post-pandemic practices. However, external information and the people around them will affect individuals' emotions and psychological cognition, stimulating their understating and perception of the current pandemic to a certain extent (Sjberg, 2007; Shi et al., 2021).

Figure 1 presents the CI decisions of the respondents. It can be gleaned that 92.30% of them are willing to get involved in every activity that the health and community authorities are implementing, while only 7.70% responded that they are not actively engaged

in every activity implemented by LGUs and health authorities during the ECQ. As a result, Bicolanos have voluntarily decided to practice the community's preventive measures by LGUs and health authorities. It indicates that the government or implementing agencies of potential PPCB or practices will not face difficulties during the implementation period. The Bicolano respondents' decisions to participate in community activities during ECQ are for them to be safe and not to be infected by COVID-19, for the frontliners to do their jobs efficiently because the LGU implemented the ECQ very smoothly and effectively, and for them not to be charged for violation of Mandatory Reporting of Notifiable Diseases and Health Events of Public Health Concern Act.

**Figure 1**

*Community Involvement Decisions*



The government distributes sufficient financial and goods support. In this scenario, if Bicolanos participate effectively in ECQ and follow the minimum health protocols, regional economic growth may not be a barrier to being realized. It may even transcend national economic development because economic activities will continue to flow normally. However, people's willingness to adhere to community mitigation measures may be influenced by the severity of illness they observe in the community, their need for income, and the level of society, individual, and family disruption (Blendon et al., 2008).



**Table 5***Public response about their ability to stay at home during ECQ*

Code	Statements	Responses			
		Yes	%	No	%
ASH1	I want to stay at home for the duration (days) as recommended by public health officials because I have COVID-19 symptoms.	106	90.60	11	9.40
ASH2	I and all family members will stay at home for the duration (days) as recommended by public health officers because a member of the household had flu-like COVID-19.	93	79.50	24	20.50
ASH3	I can take care of sick household members for 1 to 6 months at home.	72	61.50	45	38.50
ASH4	I am worried about staying home with a sick household member and getting sick too.	101	86.30	16	13.70
ASH5	There is someone who cares for me at home if I will get sick.	103	88.00	14	12.00
ASH6	We have difficulty accessing food and other basic needs.	87	74.40	30	25.60
ASH7	A member of my family and I have lost salaries and have money problems.	84	71.80	33	28.20
ASH8	A member of my family and I have a hard time being stuck at home for so long.	91	77.80	26	22.20
ASH9	I will not be able to get powdered milk, diapers, or other essential things for a baby in my family.	48	41.00	69	59.00
ASH10	A family member and I cannot get the necessary healthcare or prescription drugs.	69	59.00	48	41.00
ASH11	A member of my family and I are unable to get care for a disabled person in our home.	43	36.80	74	63.30
ASH12	A member of my family and I are unable to get care for an older person in our home.	45	38.50	72	61.50
ASH13	A member of my family and I have difficulty caring for the (child/children) <5 years old in our home.	105	89.70	12	10.30
ASH14	A member of my family and I have lost our job or business due to having to stay at home during ECQ.	70	59.80	47	40.20

*Note: Statements were adapted from Blendon et al. (2008).*

Table 5 presents respondents' responses to the questions about their ASH during ECQ. Because they had COVID-19 symptoms, most (106 or 90.60%) said they would like to stay at home for the recommended number of days. They also worried about staying at home with a sick household member and getting sick. If they become ill, they should have someone at home to care for them. Furthermore, they have difficulty caring for the child/children (below five years old) in their home. However, 69 or 59% of the respondents believe that the COVID-19 pandemic is not a barrier to obtaining or buying powdered milk, diapers, or other

essential items for a baby in their family, and they assured that they could provide healthcare to their elderly and disabled household members.

**Table 6**

*Public response about school closure during ECQ*

Code	Statements	Responses			
		Yes	%	No	%
SC1	Since the school closed for 1 to 2 years, there is an arranged care requiring at least one employed person to stay home from work.	92	78.60	25	21.40
SC2	Since the school closed for 1 to 2 years, there has been an arrangement care that at least one employed adult household member could go to work.	93	79.50	24	20.50
SC3	Since the school has been closed for one year, are you willing to give school lessons at home?	105	89.70	12	10.30
SC4	The parents need help giving school lessons at home.	111	94.90	6	5.10
SC5	Since the schools are closed, the parents can work from home and care for their children.	104	88.90	13	11.10
SC6	The parents can keep their children from taking public transportation, going to public events, and gathering outside the home while schools are closed for 1 to 2 years.	100	85.50	17	14.50
SC7	The children can work their school requirements because of viable online classes.	100	85.50	17	14.50
SC8	The children can have enough time to read/study lessons sent by their teachers/instructors via online classes.	88	75.20	29	24.80
SC9	For elementary pupils, there is a problem that children cannot get free meals.	71	60.70	46	39.30
SC10	The children helped the parents work or have income while the schools were temporarily closed.	82	70.08	35	29.91

*Note: Statements were adapted from Blendon et al. (2008).*

Regarding SC, most respondents are willing to provide school lessons at home for one (1) year, and the parents need assistance in giving school lessons at home (Table 6). Furthermore, one hundred four, or 88.90% believed that the parents could work from home (WFH) and take good care of their children while the schools were temporarily closed. They also thought that the parents could prevent their children from taking public transportation, going to public events, and gathering outside the home while schools are closed for 1 to 2 years. Respondents are also optimistic that the children will be able to work their school requirements due to viable online classes and that children will have enough time to study

their lessons sent by the teachers/professors online. However, children in elementary school may not receive their free meals from school during ECQ. They are at the stage where they already have arrangements for who will stay at home to care for their children and who will work for them. At the same time, 70.08% of them said that during SCs, the children could help their parents to work or earn money.

**Table 7**

*Public response about staying at home for work during ECQ.*

Code	Statements	Responses			
		Yes	%	No	%
WFH1	Work from home since the start of the COVID-19 pandemic.	84	71.80	33	28.20
WFH2	There is a severe financial problem while staying at home for work for 1 to 6 months.	86	73.50	31	26.50
WFH3	I can work at home during enhanced community quarantine.	89	76.10	28	23.90
WFH4	If I had to stay at home for 2 to 6 months, I would be able to work from home for that long.	77	65.80	40	34.20
WFH5	The workplace had planned for the outbreak of the COVID-19 pandemic, which included encouraging the sick to stay at home.	106	90.6	11	9.40
WFH6	The workplace had planned for the outbreak of the COVID-19 pandemic, which included information about COVID-19.	104	88.90	13	11.10
WFH7	The workplace had a plan for the outbreak of the COVID-19 pandemic, which included information on what supplies to keep at home.	98	83.80	19	16.20
WFH8	The workplace had a plan for the outbreak of the COVID-19 pandemic, which included expanding options to work from home.	104	88.90	13	11.10
WFH9	Because of the public health officer's recommendation, I am staying at home even though my employer told me to resume work.	71	60.70	46	39.3
WFH10	Your worried employer asked you to go to work even if you felt sick during the outbreak.	60	51.30	57	48.70
WFH11	Even if I stay home from work, I still get paid.	92	78.60	25	21.40

*Note: Statements were adapted from Blendon et al. (2008).*

In terms of WFH during ECQ (Table 7), most respondents believed that their workplace had planned for actions to combat the outbreak of the COVID-19 pandemic, which included information about the virus, encouraging the sick to stay at home, expanding options to work from home, and even providing supplies to keep at home during a pandemic. Ninety-two (78.60%) said they are paid because they can work at home. They agreed,

however, that staying at home for work for 1 to 6 months will cause serious financial problems, and they are worried that their employers will require them to report to work even if they feel sick.

The results of the public response are similar to what Blendon et al. (2008) concluded in their study, in which they stated that if community mitigation measures for a severe pandemic were instituted, most respondents would comply with recommendations but would be challenged to do so if their income or job was severely compromised. This is precisely what is happening to countries all over the world right now. Furthermore, they predicted that during a severe pandemic like COVID-19, public health authorities would likely recommend that all the sickest people stay home while ill (quarantined). At the same time, their level of preparedness will determine the resilience of those who must remain at home during a pandemic. They acknowledged that careful community planning, including public education and engagement, will be required to encourage the public to be prepared for the COVID-19 pandemic. Furthermore, they mentioned in their study that one of the critical interventions for potentially reducing virus transmission during a pandemic will be to dismiss students from schools, close children's facilities, and keep children from re-congregating in the community. More so, the perceived effectiveness of government and non-governmental organizations in dealing with crises is likely to influence public response. Planning for implementing community mitigation measures and actions to reduce secondary consequences are essential steps in enhancing adherence to public health recommendations.

**Table 8**

*Relationship between the level of awareness and community involvement*

Variables	n	r <sub>pb</sub>	Interpretation	t-value	p-value	$\alpha$	Decision
Level of Awareness and Community Involvement Decision	117	0.28	Positive Weak Association	0.19	3.53	0.05	Reject H <sub>0</sub> (Significant)

*Note: If the observed value of r is greater than or equal to the tabled value for the appropriate level of significance and degree of freedom, reject H<sub>0</sub> (Altare et al., 2005).*

Table 8 clearly shows the relationship between the level of awareness and CI. The computed  $r_{pb}$  of 0.28 indicates a weak positive relationship. It was also revealed that the t-value of 0.19 shows a significant relationship between the level of awareness and CI. It is explicitly noted in this case that if the observed value of  $r$  is greater than or equal to the tabled value for the appropriate level of significance and degree of freedom, reject the null hypothesis (Altare et al., 2005).

The findings imply that respondents' knowledge of the COVID-19 pandemic, particularly its causes, symptoms, and consequences, may influence their decision to participate in the community. Individuals with high level of awareness about the pandemic can effectively decide how to prevent virus contamination or outbreak at home. Understanding preventive measures and healthcare practices may also help an individual determine how he will publicly participate during the ECQ and vaccination roll-out. The significant relationship between these two variables provides a clear picture of how to apply PPCB.

**Table 9**

*Association of public responses about the ability to stay at home and community involvement*

Responses (Ability to Stay at Home)	Community Involvement		
	X <sup>2</sup>	p-value	θ/V
ASH1	1.88	0.17	0.12
ASH2	7.34	0.00**	0.25
ASH3	0.10	0.74	- /+0.03
ASH4	0.60	0.43	0.07
ASH5	4.22	0.04**	0.19
ASH6	1.08	0.29	- /+0.09
ASH7	1.27	0.26	0.10
ASH8	2.78	0.09*	- /+0.15
ASH9	0.85	0.35	- /+0.08
ASH10	3.60	0.05**	- /+0.17
ASH11	0.24	0.61	- /+0.04
ASH12	0.14	0.70	- /+0.03
ASH13	5.64	0.01**	0.22
ASH14	0.96	0.32	0.09

\*Significant at 0.10.

\*\*Significant at 0.05.

Note: The description of codes is presented in Table 5.

Tables 9,10, and 11 show the association between the public response to the ASH, SC, WFH, and CI. Following the principles of the chi-square-Phi coefficient and Cramer's V, the responses about the family staying at home for the duration (days) as recommended by public health officers because a member of the household had a flu-like COVID-19 (ASH2), about someone caring for them at home if they get sick (ASH5), about being unable to get health care or prescription drugs that they need during ECQ (ASH10), and having difficulty taking care of their child/children below five years old (ASH13) are the significant statements in CI with less than 0.05 significant level. While being stuck at home for so long is also significant at the 0.10 significance level. The variables have a negative or positive trivial to the weak association.

Table 10

*Association of public response about school closure and community involvement*

Responses (School Closure)	Community Involvement		
	X <sup>2</sup>	p-value	θ/V
SC1	0.00	0.94	0.00
SC2	0.01	0.89	0.01
SC3	1.51	0.21	0.11
SC4	0.52	0.46	- /+0.06
SC5	0.00	1.00	0.00
SC6	0.09	0.76	- /+0.02
SC7	0.46	0.49	0.06
SC8	4.95	0.02**	0.20
SC9	1.19	0.27	- /+0.10
SC10	0.05	0.81	0.02

\*Significant at 0.10.

\*\*Significant at 0.05.

*Note: The description of codes is presented in Table 6.*

In terms of the association between public response to SC and CI (Table 10), the only answer that is significant to CI is the children having enough time to read or study their lessons sent by their teachers or instructors via online classes (SC8), with less than 0.05 significance level. It does, however, have a weak positive association.

Regarding the association between public response to WFH and CI, the WFH2 or the serious financial problem while working for 1 to 6 months has a significant relationship with 0.06, which is less than the 0.10 significance level (Table 11). However, a workplace with a

COVID-19 pandemic plan, which includes expanding WFH options, has a significant positive weak association with 0.02, which is less than the 0.05 significance level.

**Table 11**

*Association of public response about work from home and community involvement*

Responses (Work From Home)	Community Involvement		
	X <sup>2</sup>	p-value	θ/V
WFH1	1.27	0.26	0.10
WFH2	3.51	0.06*	- /+0.17
WFH3	0.88	0.34	- /+0.08
WFH4	0.00	0.95	- /+0.00
WFH5	1.88	0.17	0.12
WFH6	1.21	0.27	0.10
WFH7	0.25	0.61	0.04
WFH8	4.87	0.02**	0.20
WFH9	0.14	0.70	- /+0.03
WFH10	0.92	0.33	- /+0.08
WFH11	0.00	0.94	0.00

\*Significant at 0.10.

\*\*Significant at 0.05.

*Note: The description of codes is presented in Table 7.*

**Table 12**

*Variables influencing the community involvement decisions of the respondents.*

Variables in the Equation	B	S.E.	Wald	df	Sig.	Exp(B)
Step 1 <sup>a</sup>						
Age	.167	.090	3.422	1	.064	1.182
Sex	-.904	.985	.843	1	.358	.405
Educational Attainment	-.793	.575	1.907	1	.167	.452
Family Size	.039	.062	.405	1	.524	1.040
Average Monthly Household Income	.000	.000	7.983	1	.005	1.000
Location	.208	.932	.050	1	.823	1.231
Vaccinated	-16.251	26194.662	.000	1	1.000	.000
Level of Awareness	2.921	1.025	8.126	1	.004	18.558
Constant	5.695	26194.662	.000	1	1.000	297.492

*a. Variable(s) entered in step 1: Age, Sex, Educational Attainment, Family Size, Average Monthly Household Income, Location, Vaccinated, Level of Awareness.*

The variables in the equation output show that the regression equation is  $\ln(\text{ODDS}) = 5.695 + 0.167(\text{Age}) - 0.904(\text{Sex}) - 0.793(\text{Educational Attainment}) + 0.039(\text{Family Size}) + 0.000(\text{Monthly Income}) + 0.208(\text{Location}) - 16.251(\text{Vaccination Status}) + 2.921(\text{Level of Awareness})$ .

With this, data revealed that respondents' age, average monthly household income, and level of awareness have a significant influence on their decision to participate or not in community activities during ECQ, with 0.064, 0.005, and 0.004 p-values, which are less than 0.10 and 0.05 significant levels, respectively (Table 12). Based on the equation model, every additional year of age by the respondents results in a 1.182 higher likelihood of CI. In terms of the average household monthly income, this means that for every time the respondents do not have additional income, there is only a 1.00 chance that they will involve in community activities during ECQ because they are afraid of acquiring the COVID-19 virus, which could have a significant impact on their financial situation. Furthermore, when it comes to the level of awareness, it indicates that for every additional information the respondents acquired, the decision to participate in community activities during ECQ is 18.558 times higher than those who do not participate.

Based on the findings, these variables are essential in institutionalizing PPCB, which could expand regional and national economic conditions. Since 36.75% of respondents are young (18-22 years old), it is not tricky for LGUs and health authorities to instill in their young minds the things that the community, particularly Bicolanos, needs to normalize after the COVID-19 crisis. It is predicted that young people will be the ones to change the living standards (e.g., principles) in society once they have been instilled with correct information and community practices. On the other hand, household income contributes to the institutionalization of PPCB because if individuals do not have good sources of income, it has a significant impact on their lifestyle, living conditions, and reception of opportunities that the community requires to evolve, particularly during a future outbreak of COVID-related diseases. Individuals without stable employment may be unable to afford to stay at home for months and years due to financial difficulties. As a result, additional income increases the likelihood that they will adopt PPCB or practices.

Furthermore, the more people who are well-employed or have stable jobs, the more likely the community will significantly contribute to regional and national economic progress. Since the pandemic posed so many economic challenges, mass buying power fluctuations resulted in disinvestments, layoffs, unemployment, recession, and depression. Thus, according to Keynesian Theory, the critical solution or intervention that the state should consider is to encourage investment and employment. In the Keynesian model, the



primary tools for ensuring economic growth are taxation, government spending, and the asset (Jaffee, 1998). As a result, communities and the national government must work together to ensure an increase in employment rates in the post-pandemic era, eventually leading to an economic boom.

Finally, the level of awareness or creation of information from legitimate sources can increase the possibility that an individual will participate in community activities during ECQ. An individual who has obtained a full of COVID-19-related information from credible references will be better able to decide whether to institutionalize and embrace PPCB or practices such as wearing a facemask in public, frequent proper hand washing and hygiene, doing daily exercise, and discerning pandemic related information. Furthermore, a person with a high level of awareness about his environment will be able to distinguish the right path he is attempting to embrace, which he will eventually use for his future endeavors and walks of life.

## **5. Conclusion**

Based on the results, respondents have a positive attitude toward their ability to stay at home during ECQ, except for not being able to get powdered milk, diapers, or other essential items for a baby in their family, being unable to get healthcare or prescription drugs that they need, and being unable to care for disabled and elderly people in their home. Regarding SCs and WFH, most respondents responded positively to the statements provided. When it comes to public or CI, most are willing to participate in any activity that health and community authorities are asked to implement. It also revealed a significant relationship between the level of awareness and CI. School closure and WFH during EQC significantly affect respondents' CI decisions, similar to some public response statements on the ASH. The age, average monthly household income, and level of awareness, on the other hand, significantly influence respondents' decision to participate or not in community activities during ECQ.

Bicolanos are well-known for their resilience in natural disasters, particularly during rainy seasons in the country. During this season, the Bicol region is frequently hit by strong typhoons. As a result, Bicolanos have established resiliency in the face of natural calamities. However, the COVID-19 crisis tested their resiliency, negatively impacting their economic

conditions. As a result of the findings, the institutionalization of PPCB in the Bicol region, anchored on the preventive measures implemented during ECQ as well as the mandatory COVID-19 vaccination, is highly likely to be implemented at the community level to help the country's gradual recovery of inclusive regional and national economic growth.

With this, it is critical to discourse on how the Kurt Lewin Change Management model can be used to change Bicolanos' behavior, specifically in implementing PPCB or practices. Developing post-pandemic community policies may assist residents in motivating and preparing for community behavioral change. Following that, community behavioral change involves forming new attitudes, beliefs, and behaviors as new ideas or practices are implemented within a community or country. An inclusive political institution model may be implemented in this part to encourage Bicolanos to participate and engage in the execution of newly developed PPCB or practices. A sufficiently centralized and inclusive political structure may provide public participation in the community's institutionalization of new beliefs, attitudes, and behaviors. In the refreezing stage, a new community behavioral change will be institutionalized and integrated into the community cultural system. In this regard, Bicolanos may be much more resilient once PPCB is applied, even if new variants of COVID-related viruses emerge. Bicolanos' participation in this recommendation will undoubtedly result in regional and national inclusive socio-economic growth. Furthermore, practical regional actions require reaching out to multiple partners and engaging with different actors across common goals.

However, the application and implementation of this paradigm may impose additional burdens on Bicolanos and put their resilience and adaptability to change to the test. When they learn about a new change, Bicolanos may get concerned about their participation. It makes them question if they can carry out their tasks efficiently. The refreezing stage is another implication. It takes a long time to freeze and adjust to new developments. Because Bicolanos may or may not follow the changes in regulatory implementation as changes continue in a challenging environment, the community may require a longer time to adjust and compromise its socio-cultural system. This paper also suggests that other variables and concepts may be used in future research to analyze the creation, formulation, and implementation of post-pandemic community behavior. Practical approaches may be investigated to implement the policies related to this topic appropriately.

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